35 U.S.C. § 102

The Examiner rejected claims 1-24 under 35 U.S.C. § 102 as being anticipated by Locke et al. This rejection is respectfully traversed.

The present invention is to an improved method for dynamically selecting error correction parameters by establishing a relationship between the FEC parameters and a coding gain. Coding gain is defined in the application as referring to the "difference in power that the non-error correcting system would require to transmit data of a specified bit error rate as compared to the power required by the error correcting system." ¶21 The coding gain is then set to a minimum predetermined value. The parameters including N, R are then determined that can provide the coding gain. The coding gain is then incremented and the process is repeated until the maximum coding gain is reached. The maximum bytes per symbol is then determined for all incremental coding gains. Various permutations on this process and additional steps are provided in the various embodiments of the invention.

The Examiner has applied Locke et al. to the claims as anticipating each and every element of claims 1-24. The applicant respectfully traverses this finding.

Locke et al. shows a method of maximizing error-corrected data rate, but does so using an entirely different method and does not suggest the claims of the current invention. Nowhere in the patent does Locke et al. mention or teach the use of "coding gain" or transmission power as a variable or a key in determining the maximum transmission rate. Locke et al. merely shows data rate as affected by the Reed-Solomon parity bytes required to meet the maximum —allowed corrected bit error rate by selection of codeword

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configuration. The process merely determines the minimum number of Reed-Soloman parity bytes required for acceptable reception, and computes the resultant data rate and keeps track of the maximum ("highest") data rate. No where does Locke et al. determine the coding gain or use the coding gain to determine code-word length and redundant length. Therefore the steps recited in the present claims are not met, namely:

(a) establishing a relationship between said parameters and a coding gain;

(b) initializing said coding gain to a minimum predetermined value;

(c) determining, based on said relationship between said parameters and said coding gain, an intermediate set of parameters for providing a preferred result for said coding gain.

For at least these reasons, claims 1, 10, 15 and 16 as well as claims 2-9 and 11-14 depending from claims 1 and 10 respectively should be allowed over the art of record. In order for a reference to anticipate the claims of the present invention, each and every element claims must be shown in the prior art reference. As recited above, the recited claimed elements do not appear in the prior art reference and therefore cannot anticipate the present claims.

In claims 20 and 21, "first means for establishing a relationship between said parameters and a coding gain" is not shown as well as "second means for initializing said coding gain to a minimum predetermined value; [and] third means for determining based on said relationship between said parameters and said coding gain, an intermediate set of parameters for providing a preferred result for said coding gain." For these reasons, the 102 rejection must fail, and the claims 20, and 21 as well as dependent claims 22-24 should be allowed over the art of record.

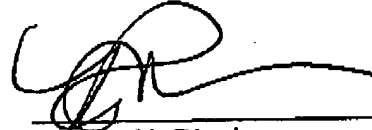<div align="right">

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Formal Drawings

The indication by the Examiner in the recent Office Action that the formal drawings were approved by the Draftsman is noted with appreciation.

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Summary

Applicants have made a diligent and bona fide effort to answer each and every ground for rejection or objection to the specification including the claims and to place the application in condition for final disposition. Reconsideration and further examination is respectfully requested, and for the foregoing reasons, Applicant respectfully submits that this application is in condition to be passed to issue and such action is earnestly solicited. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Robert N. Blackmon, Applicants' Attorney at 703-684-5633 to satisfactorily conclude the prosecution of this application.

Dated: May 1, 2006

Respectfully submitted,

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